

I Claim:

1. A configuration for testing semiconductor devices, comprising:

a common current/voltage supply unit for testing the semiconductor devices;

a plurality of pairs of individual current/voltage supply line devices connected to said common current/voltage supply unit, each of said pairs adapted to connect one of the semiconductor devices to be tested to said common current/voltage supply unit; and

current measuring devices respectively formed in said individual current/voltage supply line devices of each of said pairs and respectively measuring an individual current consumption of a given one of the semiconductor devices to be tested, each of said current measuring devices having at least one Hall sensor device.

2. The configuration according to claim 1, wherein said Hall sensor device measures an electric current flowing in said respective current/voltage supply line device by a magnetic field generated by the current.

3. The configuration according to claim 1, wherein said Hall sensor device has one of:

a Hall sensor measuring a given measurement range; and

a plurality of Hall sensors measuring a plurality of given measurement ranges, said ranges at most partially overlapping one another.

4. The configuration according to claim 3, further comprising a magnetic field concentrating device for each of said Hall sensors, said magnetic field concentrating device concentrating the magnetic field arising as a result of the current flow in an associated one of said current/voltage supply line devices substantially onto a respective one of said Hall sensors.

5. The configuration according to claim 4, wherein said magnetic field concentrating device is a core of a soft-magnetic material.

6. The configuration according to claim 5, wherein said magnetic field concentrating device is a core of ferrite.

7. The configuration according to claim 4, wherein said magnetic field concentrating device substantially encloses a

cross-section of a respective one of said current/voltage supply line devices at at least one location.

8. The configuration according to claim 4, wherein:

said magnetic field concentrating device has a gap; and

a respective one of said Hall sensors is disposed in a region of said gap.

9. The configuration according to claim 4, wherein:

said magnetic field concentrating device has a gap; and

a respective one of said Hall sensors is disposed in said gap.

10. The configuration according to claim 1, wherein said Hall sensor device is a compensation current converter or closed-loop Hall transducer.

11. The configuration according to claim 10, further comprising at least one magnetic field compensation device.

12. The configuration according to claim 11, further comprising a magnetic field concentrating device for each of said Hall sensors, said magnetic field concentrating device

concentrating the magnetic field arising as a result of the current flow in an associated one of said current/voltage supply line devices substantially onto a respective one of said Hall sensors, said at least one magnetic field compensation device being a winding in a region of said magnetic field concentrating device.

13. The configuration according to claim 12, wherein:

said magnetic field concentrating device is a core of a soft-magnetic material; and

said at least one magnetic field compensation device is a winding around said core.

14. The configuration according to claim 1, wherein the semiconductor devices are at least one of memory chips, wafers, and semiconductor modules.

15. The configuration according to claim 1, further comprising a circuit board, said common current/voltage supply unit, said pairs of said individual current/voltage supply line devices, and said current measuring devices are at least partly formed on said circuit board.

16. The configuration according to claim 1, further comprising a motherboard, said common current/voltage supply unit, said pairs of said individual current/voltage supply line devices, and said current measuring devices are at least partly formed on said motherboard.

17. The configuration according to claim 1, further comprising a contact-making apparatus for contacting the semiconductor devices to be tested.

18. The configuration according to claim 17, wherein said contact-making apparatus is a needle card.

19. The configuration according to claim 15, wherein said Hall sensor device is integrated on said circuit board.

20. The configuration according to claim 16, wherein said Hall sensor device is integrated on said motherboard.

21. The configuration according to claim 18, wherein said Hall sensor device is integrated on said needle card.

22. A configuration for testing semiconductor devices including at least one of memory chips, wafers, and semiconductor modules, comprising:

a common current/voltage supply unit for testing the semiconductor devices;

a plurality of pairs of individual current/voltage supply line devices connected to said common current/voltage supply unit, each of said pairs adapted to connect one of the semiconductor devices to be tested to said common current/voltage supply unit; and

current measuring devices respectively formed in said individual current/voltage supply line devices of each of said pairs and respectively measuring an individual current consumption of a given one of the semiconductor devices to be tested, each of said current measuring devices having at least one Hall sensor device.